

Theodore Ashmead.

Tetanus.

admitted March 26th 1822.

at the corner of Wood & Julian St.
Mrs Miller

George Johnson

1860

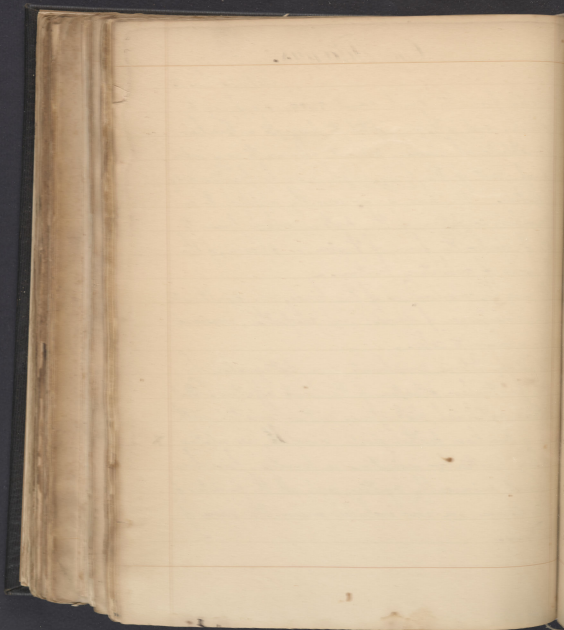
admitted March 28th 1860

On Tetanus.

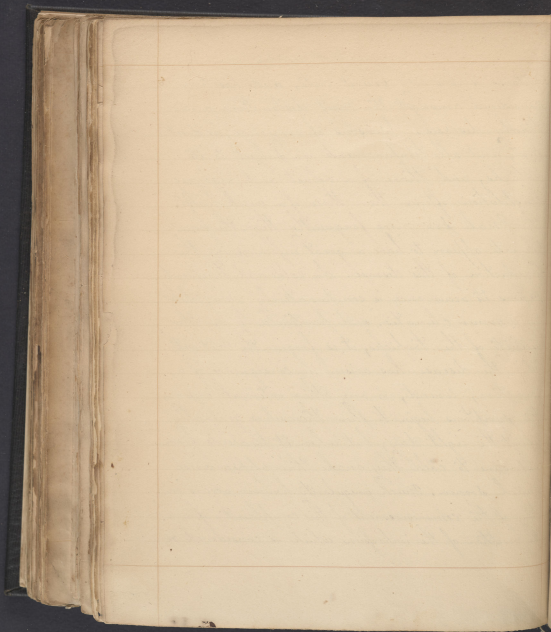
Tetanus has its origin from the Greek word ΤΕΙΓΩ, signifying to Trick, and is now adopted to designate a peculiar constitutional disease, without reference to any individual part of the body, which may be particularly affected. The term is now correctly applied to a morbid condition of the system which presents itself under the form of tension, or Spasm, of the muscles of voluntary motion. -

It may be considered as of two kinds, viz. symptomatic, the consequence of wounds; and idiopathic, occasioned by exposure to cold. -

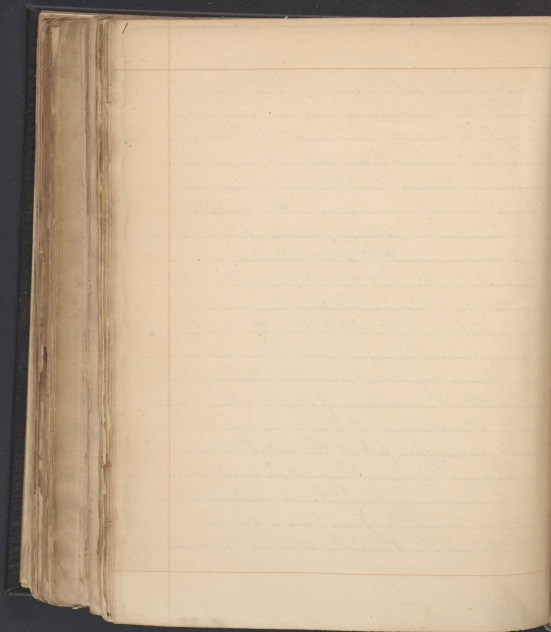
Formerly tetanic complaints were distinguished by the particular situation of the part affected. But these artificial distinctions, neither connected with any peculiar pathological principle, nor relating to any particular indications in practice, have been almost universally rejected; and all the varieties of the disease are now included under the name of Tetanus. x



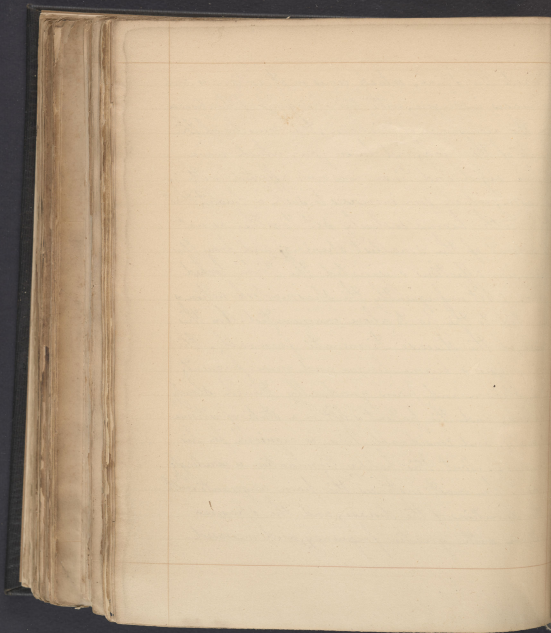
Typhus is of a very ancient date, and has been considered amongst the most destructive and deadly diseases. Persons of every age, and either sex, and all temperaments are Subject to its attacks, and those of a robust and vigorous constitution oftener than those of a weak habit. The Male Sex more frequently than the female. Climate appears to have a great influence in the production of this disease. In cold and temperate regions its occurrence is comparatively rare; whilst in warmer climates, and particularly in the vicinity of the tropicks, it is frequently met with. When the disease has arisen in consequence of a laceration, wound, or any other external injury, the symptoms begin to show themselves generally about the eight day; but when it proceeds from exposure to cold they make their appearance much sooner. Much irregularity however occurs in time of the commencement of the complaint, from the reception of the impression which is considered as



to exciting cause; but as occasioned by the degree of
action of the predisposing, and exciting causes,
this will be hereafter considered. Of the two
forms, that arising from external injuries is
universally allowed to be the most dangerous.
Tetanus generally commences with a rigidity
and pain in the extensor muscles of the neck,
at its commencement it is not attended with
spasmodic action, but the attention of the patient
is excited by a disagreeable sensation, which is
increased by an attempt to turn the head,
in many cases this is supposed to be nothing
more than a common rheumatic affection of the
neck, untill the recurrence of spasm attracts notice,
and excites alarm, at this period of the
disease, uneasiness is felt at the root of the tongue,
accompanied by an unpleasant sense of constriction
of the fauces, whereby deglutition is rendered dif-
ficult, and painfully, severe pain is soon felt
at the pit of the stomach, shooting backwards

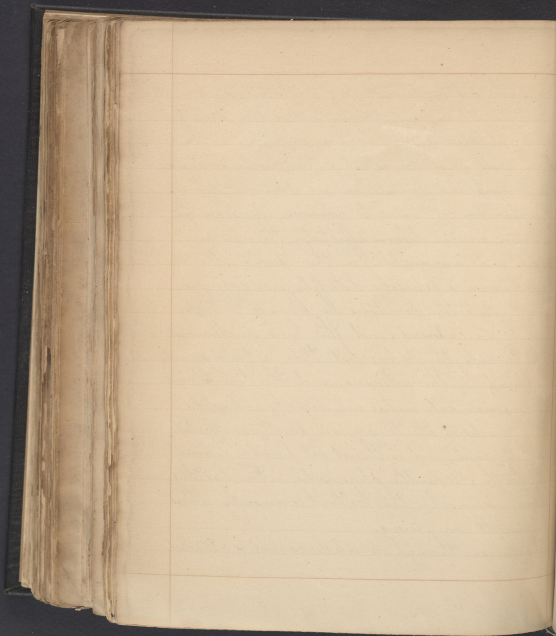


towards the spine, which comes on at intervals, and
increases in degree, with the progress of the disease.
In the recurrence of this pain, the muscles of the
back of the neck, and lower jaw, which were
before rigid and tense, are now affected with
spasm, which soon increases to such a height, that
the teeth become so closely set together as not
to admit of the smallest opening; and from this
peculiar affection originated the term locked
jaw. Not unfrequently the spasmodic action is
limited to the parts above enumerated. In this
case, if the disease terminate favourably, the
intermissions become longer and more frequent,
the spasm and pain gradually though slowly
subside, and the patient is left in a state of extreme
debility, and considerable time is required for his
recovery. But this happy termination is exceedingly
rare. In most instances the pain augments with
the duration of the disease, and the spasm
action with greater frequency, and increased



low. The system cannot long withstand such repeated attacks, and the Patient is soon seen to sink, apparently from exsiccative irritation. In those cases where the extent of the disease is increased, the progress and Termination are somewhat different. The disorder continuing to advance, every organ of voluntary Motion becomes affected, the eyes are rigid and immovable, in their sockets, the Countenance is hideously distorted, and expresses great distress. Sometimes the flexors of the thigh, and leg are contracted, and the knees are drawn up towards the body; but their action is generally balanced by the extensors, and the Trunk, and the inferior extremities are rigidly extended. The muscles of the Tongue are sometimes affected with Spasm, and is thrust out forcibly between the Teeth; when the spasmodic action has thus become universal, the Patient commonly expires in violent convulsions.

This disease through its whole course is attended

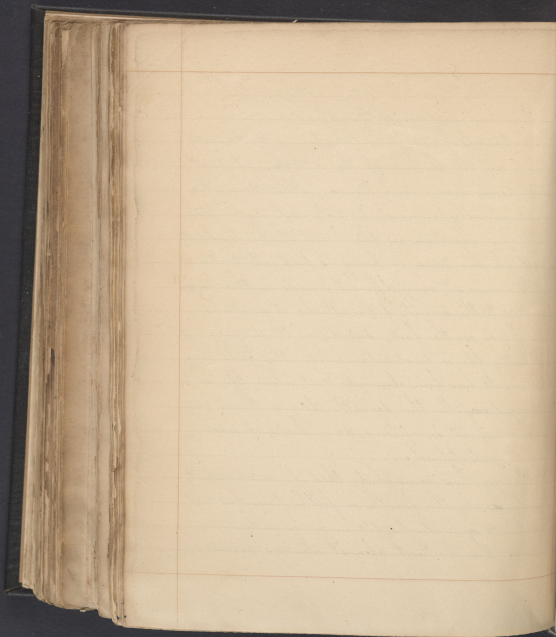


with great pain, which is proportioned to the duration and violence of the Spasm.

The intervals of ease, or relaxation of the Muscles, depend on the violence of the attack. At first, the spasms recur every ten or fifteen minutes, and generally renewed by external compressions, or by any exertion on the part of the patient, by which his neck or body is put into motion.

Death occurs at very different periods in this disease, according to the severity of the attack; it sometimes takes place on the first, second, or third day; yet frequently life is protracted till the tenth day or later. It has been observed that where life is prolonged until the seventh day without any increase of its symptoms, some hope of recovery may be entertained. . . .

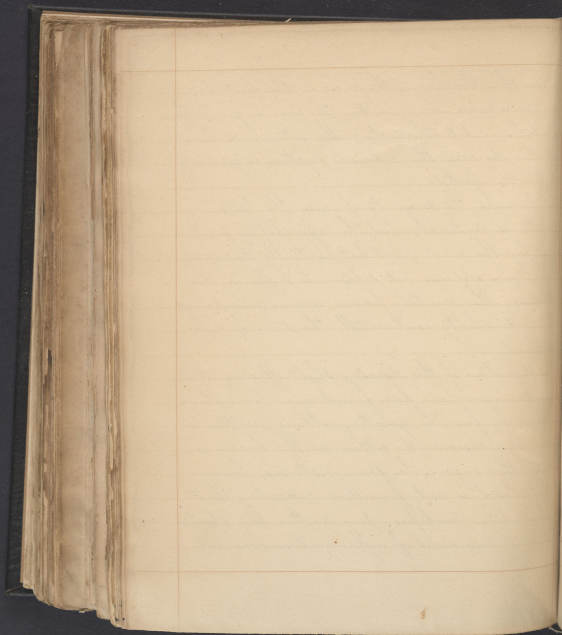
D^r Parry has remarked, that if, in an adult, the pulse by the fourth or fifth day does not reach 100 or perhaps 110 in a minute, he believes the patient almost always recovers;



If on the other hand, the pulse on the first day is 120 or more in a minute, the case is generally fatal. Notwithstanding the extreme violence of this disease, the arterial system is generally but little affected.

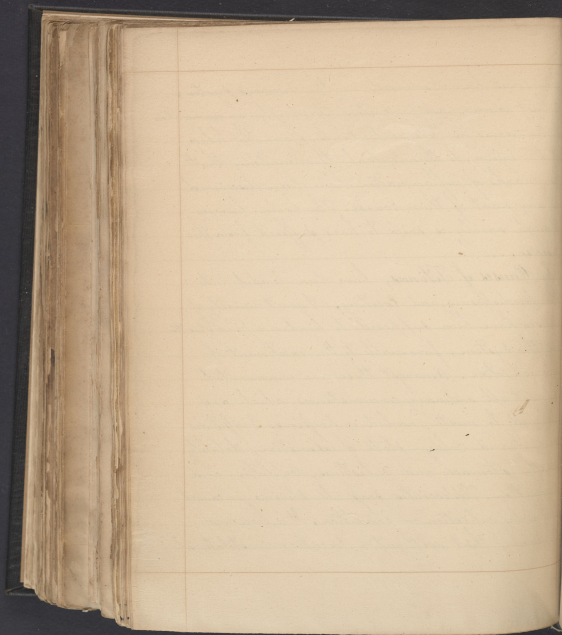
In perhaps the majority of cases the pulse continues natural, and the assimilating functions are for the most part but partially deranged. The brain appears but seldom to suffer in this disease; the mental powers remain unimpaired, and sensibility exist untill the scene of life is closed.

On dissections of this disease, slight effusions within the Cranium have been found in a few instances; but in by far the greater, nothing particular has been discovered either in the brain or any other organ. In some instances, however, the blood is not found in coagula, but fluid like molasses. Some writers have asserted that appearances of inflammation have in a



few cases been discovered in the nervous system, whilst more modern writers assert after an examination of the nerves in tetanic patients, from the place of the injury, to their central termination, that no marks of inflammation have been discovered in any part of their course. The brain however though rarely is said to have suffered from this disease....

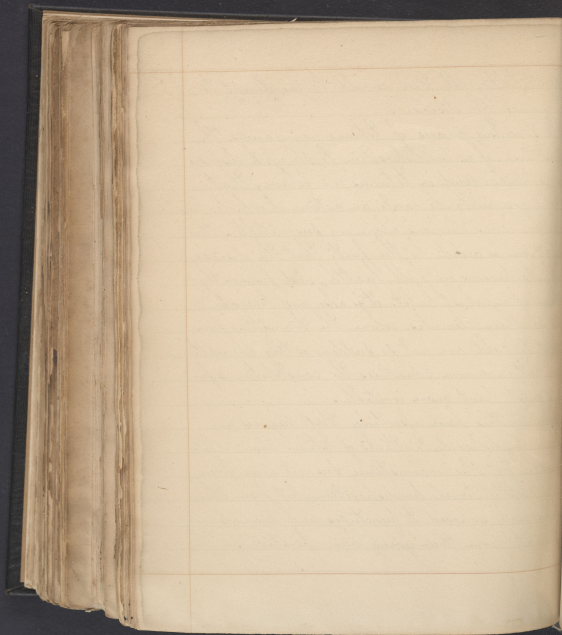
The Causes of Tetanus, have been divided into the predisposing, and exciting. A great variety of causes have been supposed to produce a predisposition in the system, favourable to the excitement of tetanic action. Amongst these are enumerated almost all ordinary circumstances, which are believed to invite morbid impressions. Vicissitudes of heat and cold, state of exhaustion, debility in the stomach and intestines, depletion, and irritation. Hippocrates says, all spasms are caused either by rebellion or incursion. It is however believed, that without a peculiar constitutional



irritability, all these would be insufficient to produce the disease.

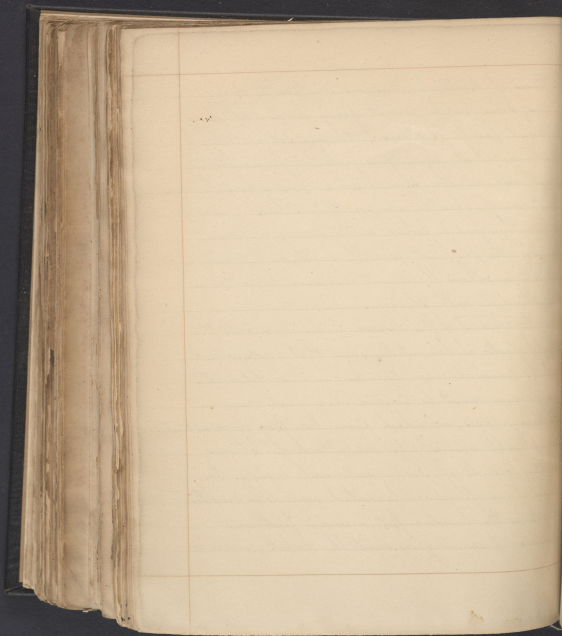
The Existing causes of Tetanus are various. The existence of a predisposition to specific diseases is certain. And in Tetanus we believe, that ordinary irritants excite an action, of which particular constitutions alone are susceptible. This opinion is aided by the fact, that the disease attacks persons in full health, and frequently those of a robust habit. It is also most prevalent in Southern climates, where the transitions from heat to cold are not so sudden as they are with us; but in warm countries the constitution is for the most part more irritable.

Some writers have asserted, that Negroes are more predisposed to attacks of Tetanus than white people: but this circumstance does not arise from any constitutional predisposition, but from their being more exposed to punctures and wounds in the feet, from their going bare footed.



Instances of partial nervous irritability daily occurs: some people cannot see a finger bleed without fainting; others teeth are set on edge by touching velvet; and thus violent inflammation is induced on the skin of some persons by substances that are perfectly innocent to others. Cases frequently occur in which without any apparent cause the slightest scratch produces tetanus, whilst in others the most extensive laceration is unattended with spasm.

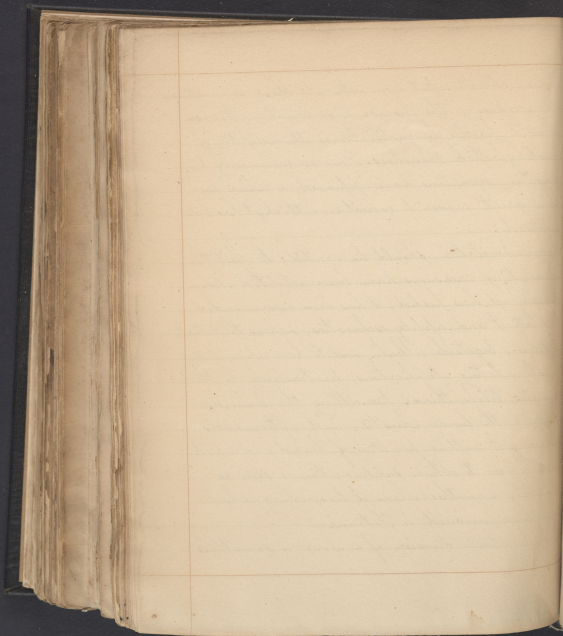
The treatment of this disease divides itself into the prophylactic or preventative, and that mode which is to be pursued when the disease has appeared. The former must be limited in a great measure to those cases, in which from peculiar circumstances, we should anticipate an attack of Tetanus, as the result of some external injury. In cases of punctured or lacerated wounds in sensitive parts, as the hands or feet, or under tendinous fascia; if occurring in irritable habits, and in a



warm climate. But even with all these circumstances, the accession of the disease is so uncertain, that we should hardly be justifiable in the adoption of prophylactic measures. However when any premonitory symptoms have appeared, or where we have great reason to expect an attack, it has been advised. . . .

Counterirritation should be excited; to effect this a variety of measures have been adopted. When the wound has healed, it has been recommended to dilate it and apply escharotics, such as the Nitrate of silver, vegetable alkali, and to keep up irritation by stimulating applications, particularly by the Spiritus turbinthina. pencilling the wound. Truly with lunar caustic, and afterwards covering it with a poultice of bread and milk, with a view to obtain suppuration as soon as possible is another mode of proceeding which has been pursued in Tetanus. . .

The partial division of a nerve is sometimes

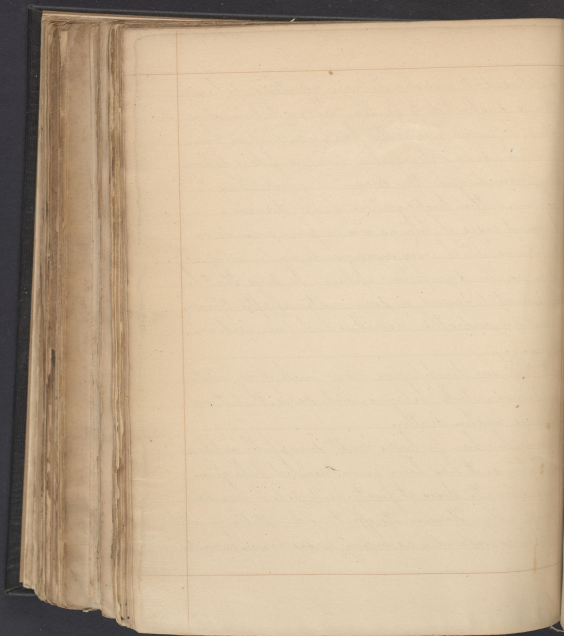


supposed to occasion tetanic affections; when this is suspected to be the case, a deep incision should be made into the part which has been injured, so as to divide the nervous fibres between the wound and the sensorium, and thus to prevent the propagation of the disease.

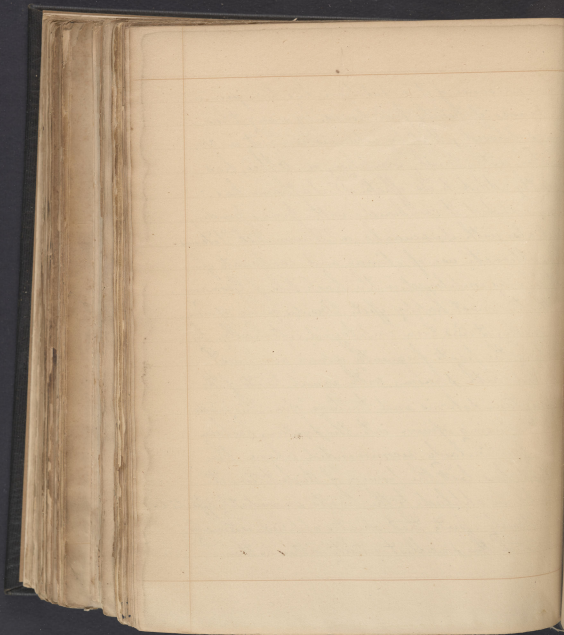
In most cases of tetanus arising from wounds in the limbs, Dr Larrey recommends amputation as soon as the symptoms appear. he says that he found it to succeed in some instances after Opium, Camphor, and other remedies had been used in vain....

Dr Physic disapproves very much of amputation in traumatick tetanus, and says, that it will always hasten death.

Opium has been perhaps most successfully employed in Tetanus; it has been recommended to be given in moderate doses at first, and so to be increased gradually. However its effect, and not the quantity is to be considered, as many cases are on record



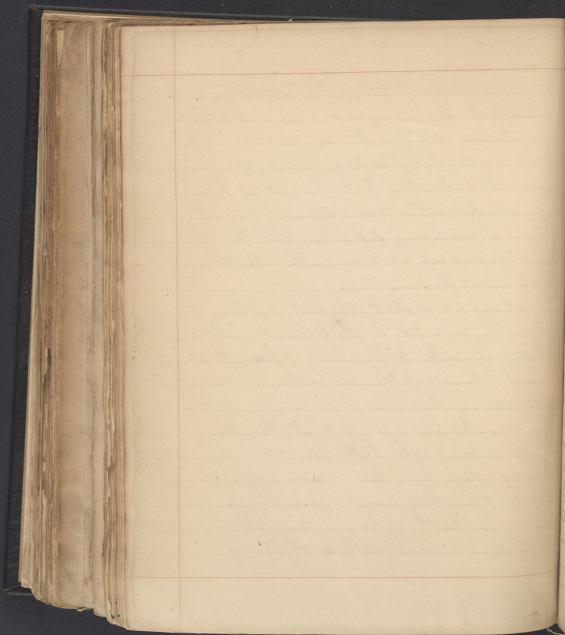
where an ounce of it in substance has been given in the course of twenty four hours. by many it has been supposed, that by administering it in conjunction with Musk, Camphor, or Ether, has greatly added to its effects. Dr. Latham has recommended it combined with Jams, powder, and also with ipecacuanha in Traumatick Tetanus. The anodyne use of opium and carbonate of Potash, was employed in the hospitals of Germany with the most happy effect. Besides giving opium internally, it has been employed externally, by rubbing the parts frequently which are most affected with spasm, with equal parts of the Unimentum papaveris and Tinctura opii. This mode of introducing opium into the system, has been more particularly recommended where the patient has lost the power of deglutition, it should be applied to the parts immediately affected. Dr. Mosely asserts that opium applied externally are not of the smallest utility either in the



prevention, or cure of tetanus. The internal and external use of Mercury has been much extolled in the treatment of this disease. but its operation is often so slow and uncertain, that we are hardly justifiable in trusting to it alone. It has been recommended where Mercury is employed with a view of producing salivation, that the patient should be put into a warm bath with the use of Opium at the same time.

As costiveness is a constant attendant on tetanus, it should be prevented by the frequent exhibition of active aperients. Of the utility of purgatives in cases of tetanus whether idiopathic, or occurring after wounds there can be no doubt, and their efficacy is strongly enforced by Dr Hamilton.

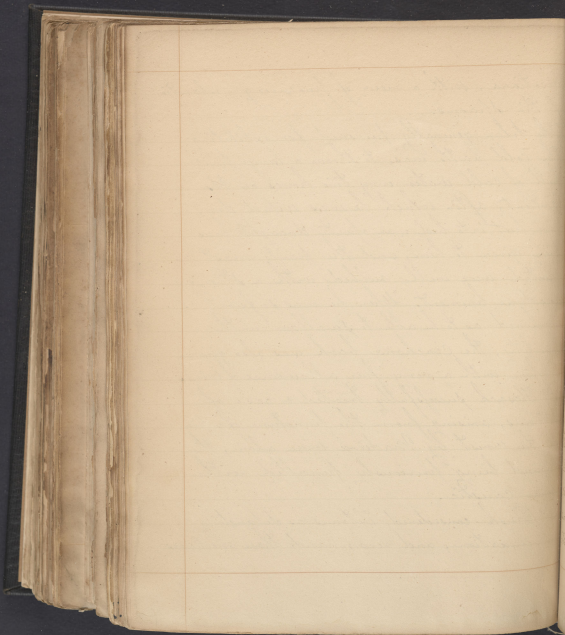
The Warm and Cold bath have both been extolled. In cases which have been occasioned by exposure to cold, it has been recommended to make use of a warm bath, in conjunction with anodyne frictions, and occasionally a clyster of



Nicotiana, with a view of procuring a relaxation
of the spasm.

The plan generally pursued for exhibiting
the cold bath was, to throw a large pail
full of cold water every two hours on the
patient, after which he was wiped dry,
and put into bed; an opiate draught was
then given to him, and the parts most
affected were well rubbed with a strong
anodyne liniment. When he was so far
recovered as to be able to swallow with
facility, the cinchona bark was also given
to him with a very free allowance of wine.
Dr Hosack successfully treated a case of
tetanus, arising from the puncture of a pin
in the wrist by Madeira wire alone, the
wound being previously pencilled with
lunar caustic.

Dr Rush considered Tetanus as depending
on relaxation, and recommends those medicines



which seem best calculated to restore the tone of the system: for this purpose, he orders the free use of bark and wine.

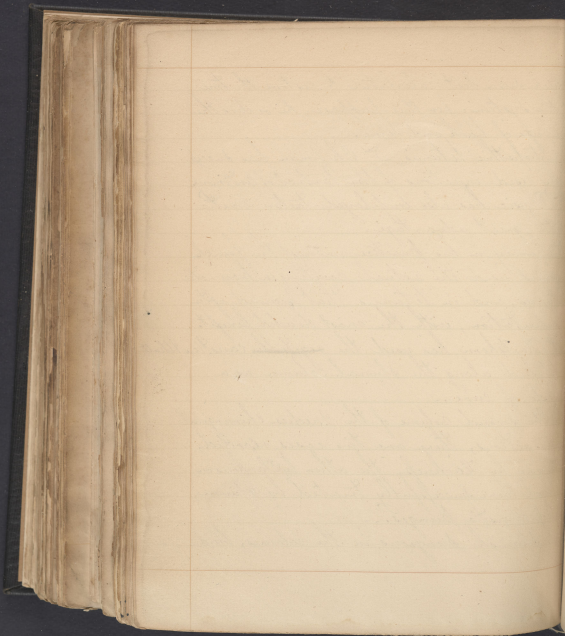
In Rheumatic Tetanus Dr Chapman has successfully used injections of the Tincture of Antimony. Dr Physic has also employed Tartar emetic with great advantage.

Dr Larrey in his practice amongst the french armies used the actual cautery in traumatic Tetanus, and in Tetanus that occurred after amputation, with the most decided benefit.

Dr Northorn has used the ~~vegetable~~ caustic, Alkali applied along the spinal column as a mode of cure.

In the second volume of the Medico-Chirurgical Transactions, there are two cases recorded, the one by Harkness, the other by Parkinson, which were successfully treated by Opium, and drastic purges.

The Spanish Surgeons in the colonies, had



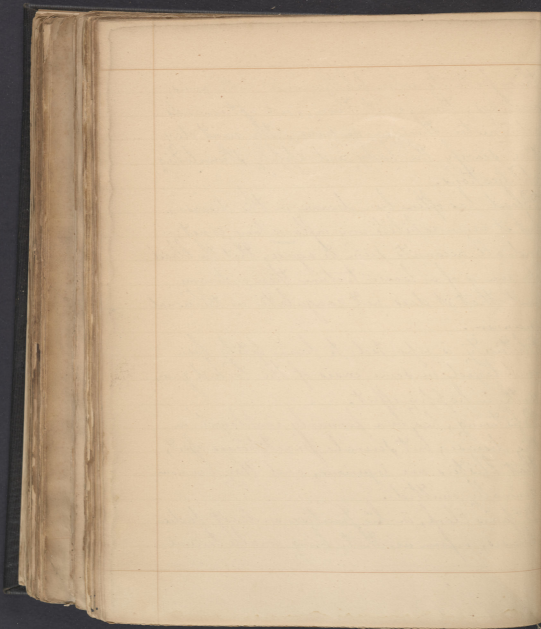
their patients when phlogosis in both arms,
and legs; then vomit them, and afterwards
administer Theriaca in wine. The next day
they scarify the body and apply stimulating
applications.

Blood has often been drawn in this disease,
but it never exhibits any inflammatory crust;
and all accounts seem to agree, that the blood
drawn is of a looser texture than ordinary,
and that it does not coagulate in the usual
manner.

Electricity is reported to have lately been
employed in some cases of the locked jaw,
with a happy effect.

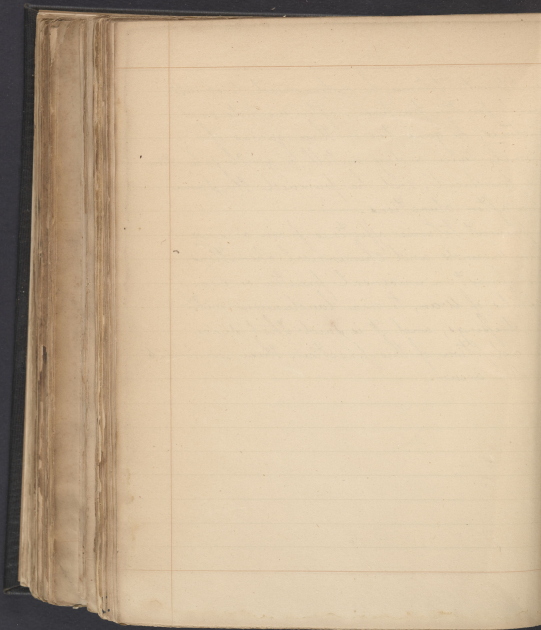
Blisters, has been formerly employed in
this disease; but several practitioners assert,
that blisters are injurious, and they are now
generally omitted.

Dr James Clark, in his practice on West Indian
diseases, informs us, that, being unable to cure



symptomatic tetanus, he endeavoured to obviate it, and for this purpose, after wounds and punctures, he gave two or three grains of calomel twice a day untill a gentle salivation was produced, and he pursued the same plan after operations.

To prevent tetanic affections from arising after wounds and ^{the} surgical operations, it is almost an universal practice on board of ships of war, to mix laudanum with the dressings, and it is said that since the adoption of this practice, these complaints seldom occur..



High Water of June 1st 1854

Thurs

Friday

June 2nd 1854

